

REMARKS/ARGUMENTS

Applicants thank the Examiner for the thorough consideration given the present application. Claims 1-3, 5, 6 and 8-11 are currently being prosecuted. Claims 4 and 7 have been cancelled. The Examiner is respectfully requested to reconsider his rejections in view of the Amendments and Remarks as set forth below.

Claim for Priority

It is gratefully acknowledged that the Examiner has recognized the Applicants' claim for foreign priority. No additional action is required from Applicants at this time.

Drawings

The Examiner has objected to Figure 9 as having Japanese writing. By way of the present Amendment, Applicants are submitting a corrected drawing with the Japanese writing removed. Accordingly, this objection is believed to have been overcome.

Specification

The Examiner objected to the Abstract as being in more than one paragraph. Applicants have now rewritten the Abstract to be a single paragraph and have also broken the lengthy sentence into shorter sentences and generally improved the form of the Abstract. Accordingly, this objection is believed to have been overcome.

Acknowledgement of Information Disclosure Statement

The Examiner has acknowledged the Information Disclosure Statements filed on July 3, 2001 and October 1, 2002. Initialed copies of the PTO-1449 forms have been received from the Examiner. No further action is necessary at this time.

Rejection Under 35 U.S.C. § 112

Claims 1-11 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. This rejection is respectfully traversed.

In regard to claims 1-4, the Examiner pointed out that it was unclear how the water content is measured. By way of the present Amendment, claim 1 has now been changed to indicate weight percentage.

In regard to claim 2, the Examiner pointed out that the recitation of 5% or more could encompass water contents greater than 12%. Accordingly, Applicants have amended the phrase as suggested by the Examiner.

Regarding claims 5-11, the Examiner objected to the term "etc." By way of the present amendments, this term has now been removed.

In regard to claims 5 and 10, the Examiner objected to the use of the term "fine." This term has now been removed.

Accordingly, all of the indefiniteness problems in the claims have now been overcome.

Rejection Under 35 U.S.C. § 102

Claims 5-8 and 10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Viitaniemi et al. (U. S. Patent 5,685,353). This rejection is respectfully traversed.

The Examiner states that the Viitaniemi et al. reference teaches a method for compressive shaping of wood using upper and lower compression plates. The wood may be pine or deciduous wood compressed to 50% of its initial thickness and also heated under compression. The water content is no more than 3%.

The Viitaniemi et al. reference compresses wood in two stages. The second stage has a smaller compressive force than the first stage so that the compressed wood returns back to its original shape. It does not compress the wood so that it stays in the compressed state permanently.

Claim 5 describes a method of permanently compressing lumber with a combination of steps, including compressing the lumber, and heating the compressed lumber, where the lumber is porous lumber with many holes and where a compressing die includes a male section and a female section and where the compressed lumber is dry-heated so as to permanently compress the lumber. Applicants submit that the Viitaniemi et al. reference does not teach this combination of steps. Especially, it is noted that the reference does not permanently compress the lumber, as presently claimed. Also, the reference does not show a compressing die having a male section and a female section, since the reference shows two flat plates. Accordingly, Applicants submit that claim 5 is not anticipated by this reference.

Claims 1-3, 5-7 and 9-11 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Arakawa et al. (U. S. Patent 6,267,920). This rejection is respectfully traversed.

The Examiner states that the Arakawa et al. reference teaches a method of compressing wood having a moisture content as low as 10% and where the wood is compressed against a shaping jig. The Examiner states that the wood is heated and that a vinyl monomer is used to fill cracks.

The Arakawa et al. reference shows a method of compressing lumber using liquid pressure. A pressure-resistant vessel for compressing the lumber is required. Further, the compressed lumber must be dried.

First, it is noted that this rejection was not applied against claim 4. The limitations of claim 4 have been added to claim 1. Many of these limitations have also been added to claim 5. Accordingly, Applicants submit that both claims 1 and 5 are allowable, since they include limitations not previously rejected by the Examiner.

Furthermore, claim 1 is a method for permanently compressing lumber having a combination of steps, including compressing the lumber, heating the compressed lumber, where the lumber is air-dried lumber with a water content of 12 weight percentage and where the lumber is air-tightly accommodated and maintained in the compressed state and dry-heated to permanently compress the lumber. Similarly, claim 5 describes a method of permanently compressing lumber having a combination of steps, including compressing the lumber, heating the compressed lumber, where the lumber is porous and where the compressed lumber is maintained in a compressing die and dry-heated to permanently compress the lumber. Applicants submit that the Arakawa et al. reference does not show either of these combinations of steps. Especially, claim 1 states that the lumber is air-dried and that the lumber is dry-heated to permanently compress the lumber. Likewise, claim 5 states that the lumber is maintained in

the compressing die and is dry-heated to permanently compress the lumber. In the Arakawa et al. reference, the wood is first softened by heating it in hot water or steam and thus is neither air-dried nor dry-heated. Accordingly, Applicants submit that both claims 1 and 5 are not anticipated by Arakawa et al.

Claims 10 and 11 claim a permanently compressed lumber formed by compressing and dry-heating in a compressing die having a male and female die section. Applicants submit that neither of the references teach these claims either. As stated above, the Arakawa et al. reference does not show dry-heating the porous lumber. Accordingly, Applicants submit that these claims are likewise not anticipated by Arakawa et al.

Claims 2, 3, 6, 8 and 9 depend from allowable independent claims and, as such, are also considered to be allowable. In addition, these claims recite other features of the invention which makes these claims additionally allowable.

Rejection Under 35 U.S.C. § 103

Claims 1-4 stand rejected under 35 U.S.C. § 103(a) as being obvious over Viitaniemi et al. in view of Arakawa et al. This rejection is respectfully traversed.

The Examiner states that Viitaniemi et al. teaches all of the limitations of claims 1-4 except for the water content. The Examiner relies on Arakawa et al. to show the water content. Applicants submit that claims 1-4 are not obvious over this combination of references.

As pointed out above, Applicants submit that the Viitaniemi et al. reference is missing a number of features described in the combination of steps of claim 1. For example, this reference does not teach that the lumber is dry-heated to permanently compress the lumber. This feature

has not even been alleged to be obvious over either of the references or their combination.

Applicants submit that claims 1-4 are, accordingly, allowable over the combination of references.

Furthermore, Applicants submit that it would not be obvious to combine the teachings of the two references. The Arakawa et al. reference clearly teaches a wet heating using steam or hot water, whereas Viitaniemi et al. teaches compression between two plates while heating. Applicants submit that it would not be obvious to combine these two different types of heating.

No Prosecution History Estoppel

Claims 1, 5, 10 and 11 have been amended to clarify the claimed subject matter. No prosecution history estoppel would be applied to the interpretation of the limitations set forth in claims 1, 5, 10 and 11 and the claims that depend therefrom in view of the fact that the subject matter has been continuously presented since the original filing date of the present application.

Conclusion

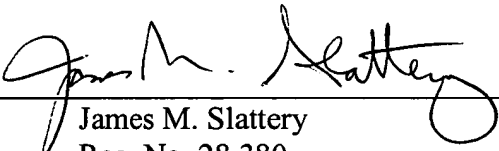
In view of the above remarks, it is believed that the claims clearly distinguish over the patents relied on by the Examiner, either alone or in combination. In view of this, reconsideration of the rejections and allowance of all of the claims are respectfully requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert F. Gnuse (Reg. No. 27,295), at the telephone number of (703) 205-8000, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachments: Abstract of the Disclosure
Replacement Sheet of Drawings